Precambrian Research

Special Issue

Initial investigations of a Neoarchean shelf margin–basin transition (Transvaal Supergroup, South Africa)

Guest Editors:

Andrew H. Knoll
Department of Organismic and Evolutionary Biology,
Harvard University,
Cambridge, MA 02138, USA

Nicolas J. Beukes
Department of Geology,
University of Johannesburg,
Auckland Park 2006
Johannesburg, South Africa

VOL. 169/1–4 (2009)

ELSEVIER

Amsterdam • Boston • London • New York • Oxford •
Paris • Philadelphia • San Diego • St. Louis

Precambrian Research 169 (2009) iv

Contents lists available at ScienceDirect

Precambrian Research

journal homepage: www.elsevier.com/locate/precamres

Contents

Special Issue
Initial investigations of a Neoarchean shelf margin–basin transition (Transvaal Supergroup, South Africa)

Guest Editors:
Andrew H. Knoll and Nicolas J. Beukes

Introduction: Initial investigations of a Neoarchean shelf margin-basin transition (Transvaal Supergroup, South Africa)
A.H. Knoll and N.J. Beukes 1

Isotopic constraints on the Late Archean carbon cycle from the Transvaal Supergroup along the western margin of the Kaapvaal Craton, South Africa
W.W. Fischer, S. Schroeder, J.P. Lacassie, N.J. Beukes, T. Goldberg, H. Strauss, U.E. Horstmann, D.P. Schrag and A.H. Knoll 15

Late Archean molecular fossils from the Transvaal Supergroup record the antiquity of microbial diversity and aerobiosis
J.R. Waldbauer, L.S. Sherman, D.Y. Sumner and R.E. Summons 28

Origin of two distinct multiple-sulfur isotope compositions of pyrite in the 2.5 Ga Klein Naute Formation, Griqualand West Basin, South Africa
S. Ono, N.J. Beukes and D. Rumble 48

Lithofacies control on multiple-sulfur isotope records and Neoarchean sulfur cycles
S. Ono, A.J. Kaufman, J. Farquhar, D.Y. Sumner and N.J. Beukes 58

Microbialite–sediment interactions on the slope of the Campbellrand carbonate platform (Neoarchean, South Africa)
S. Schröder, N.J. Beukes and D.Y. Sumner 68

Paleomagnetism of a Neoarchean-Paleoproterozoic carbonate ramp and carbonate platform succession (Transvaal Supergroup) from surface outcrop and drill core, Griqualand West region, South Africa
M.O. de Kock, D.A.D. Evans, J.L. Kirschvink, N.J. Beukes, E. Rose and I. Hilburn 80

Correlating multiple Neoarchean–Paleoproterozoic impact spherule layers between South Africa and Western Australia
B.M. Simonson, D.Y. Sumner, N.J. Beukes, S. Johnson and J. Gutzmer 100

doi:10.1016/S0301-9268(09)00034-5